TOWARD THE DEVELOPMENT OF A PROGNOSTIC INDEX IN THE OUT-PATIENT TREATMENT OF MALE ALCOHOLICS

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TOWARD THE DEVELOPMENT OF A PROGNOSTIC INDEX IN THE OUT-PATIENT TREATMENT OF MALE ALCOHOLICS

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SYNOPSIS

The present study involves an attempt to develop an index to predict the therapeutic outcome of male alcoholics who seek out-patient treatment at The Alcoholism Foundation of Alberta. Data used in the study were drawn from a sample of 120 treatment records at the Edmonton clinic of The Foundation.

Somewhat over half of the patients whose progress is classified by the clinic indicate recovery following treatment. The remainder indicate no recovery following treatment.

Acknowledging the likelihood of a multiplicity of factors influencing treatment response, attention was focussed upon the patients themselves, the nature of their drinking problems, and the circumstances under which they sought treatment. In this context, three inter-related hypotheses were formulated. They were:

I. That there are significant and measurable differences between male alcoholics subjected to out-patient treatment who:

(1) recover;

(2) do not recover.

II. That a number of these differences are of such a nature that they may be identified

easily by an interviewer in the earliest stages of treatment without prolonged investigation.

III. That these identifiable differences are of sufficient number and of such significance that they may be employed in the preparation of an index that will predict a patient's response to treatment.

The first two hypotheses were upheld; the last was not. Because the study did not result in the development of a prognostic index, its contribution is minimal in terms of prediction of therapeutic outcome. The value of the study lies in offering evidence from which the treatment center wherein it was conducted may expand the scope of its treatment services to meet the needs of a greater proportion of patients.

ACKNOWLEDGEMENTS

I wish to express my gratitude to the faculty members of the Department of Psychology, especially to Dr. D. Spearman who initially suggested the topic of a prognostic index and assisted in the development and completion of this thesis. Special appreciation also is extended to Professor C. Uhl whose patient explanations of the statistical procedures used herein have been invaluable.

I am indebted to the staff of the Alcoholism Foundation of Alberta who gave freely of their time and interest to answer the unending questions posed to them. Particular appreciation goes to Mr. A.W. Fraser, Associate Director of Treatment, and Miss E. Cuthbertson, Counsellor, for their assistance in estimating somatotypes, and to Mr. W.E. Wilby, Research Associate, for his many worthwhile points of advice.

G. E. S.

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CHAPTER I

INTRODUCTION

The puzzling problems associated with abnormal drinking or alcoholism have been examined more searchingly in the past half century than they have throughout the total of all previous history. Emerging from the obscure tangle of fears, prejudices and misinformation about alcoholism is a miscellany of scientific findings. Although a miscellany of scientific findings is not the same as an integrated body of scientific knowledge, it is much different from and vastly superior to any unreasoned utterances replaced.

A student of these problems, in surveying the literature, would be impressed initially by two features. One is the complexity of the problems of alcoholism (29). The other, and not unrelated to the first, is the diversity of viewpoints (14). Definitions of alcoholism, theories of its etiology, and methods of treatment vary widely.

Differing in conceptual level and particular emphasis, there are a number of definitions and descriptions available[1]. A sociologist may

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1. See Appendix "A" for a sample of definitions from the literature.

choose to view alcoholism as a behavioral phenonenon, consistent with or departing from a particular society's attitude toward drinking behavior; a psychologist may choose to consider it as an adjustment phenomenon, the repeated use of alcohol serving some purpose in the alcoholic's psychological economy. A physician may think in terms of pathological degrees of exposure to a toxic substance; a clergyman in terms of violation of ethical responsibilities.

For the purpose of this study, alcoholism is defined as: a condition wherein the use of alcohol results in continuing and progressively serious problems in any area of an individual's life; it is usually characterized by a progressive loss of ability to drink according to intention. This paraphrases the definition generally offered by The Alcoholism Foundation of Alberta wherein the present study has been conducted and is used for that reason rather than as a reflection of the bias of the present investigator. The broad nature of the foregoing definition also is in accord with the practice of The Foundation (both in its publications and, for the most part, in its treatment approaches). A classification of abnormal drinkers is herein not attempted and the important distinc-

tions among the terms "alcoholism", "chronic alcoholism", "alcohol addiction" and "problem drinking" are ignored in this study.

Theories of the etiology of alcoholism abound, but in the present study, as in the agency wherein it has been conducted, there is not a deliberate subscription to any one specific theoretical position. The following brief excerpts are sufficient to establish the broad framework within which The Foundation operates:

"The Foundation recognizes alcoholism as a treatable illness---the alcoholic as a sick person---(its) approach is scientific" (11). This is an official statement of 'philosophy' and each treatment worker brings to the treatment that he offers his own assortment of concepts and theory.

A variety of approaches and techniques exists in the treatment of alcoholism. They include a host of psychological methods, ranging from religious conversion to psychoanalysis, and a constantly multiplying number of physiological ones, from vitamin therapy to the use of hallucinogenic drugs. Each advertises its own degree of success, laying claim to rates of recovery that seem to depend as much upon the exactitude of the report as upon the choice of method.

The Alcoholism Foundation of Alberta operates two out-patient clinics in which the combined resources of a number of specialized disciplines are brought to bear upon the treatment of alcoholics. The Foundation's "teamwork approach" (1) involves a combination of (a) medical services, (b) individual counselling (psychotherapy, social casework), and (c) group therapy. The Foundation reports its "recovery ratio" (1) to be 56% at the end of 1958 (rising steadily from 47% at the close of 1955).

Assuming this recovery ratio to be reliably reported, it depends entirely on one's own expectations whether 'effectiveness' or the lack of it is thereby indicated.

However, a question arises. Why do certain patients respond favorably to treatment whereas others fail to respond? The reasons may be manifold and may be found: (a) within the capacities and limitations of the therapist[1]; (b) within strengths and weaknesses of the treatment program[2]; (c) within the patient's personal qualities and environmental

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1 In 1944, Abraham Myerson (26) put forward the unsupported but still unchallenged statement that "in the psychotherapeutics of alcohol addiction it is not the therapy but the therapist that counts".

2 Voegtlin and Lemere (38) in a review of then current treatment approaches evaluate various types and assess their respective effectiveness in a range from disreputable through inconclusive to successful.

situation, or; (d) within some other area or a combination of the above. The present study is directed toward the third alternative. It is concerned with those factors that, as it were, the patient brings to the therapeutic situation and which may exercise an influence upon his response to treatment.

Further questions arise in this now narrowed consideration. Are these 'patient factors', if they exist, identifiable by the treatment worker, and can they be demonstrated by an examination of existing treatment records at the clinic? If so, it may be possible to utilize the findings from such an examination as a measurement of prognosis. The findings could be a basis from which to develop and index to predict recovery.

At this preliminary stage it seemed wise to consider the utility of a prognostic index, both in a general sense of purpose and in a more specific sense of applicability.

In the general sense of purpose, there stand two main values in having a clear measurement of prognosis. First, is its obvious use in some form of treatment screening procedure. Personnel in the fields of health, welfare and rehabilitation are perpetually faced with the dilemna of too many

patients and too few hours. The Foundation is no exception in this and in its desire to give effective service to individuals seeking its aid. This is not to suggest that an unconscionable distinction should ever be made between those who will be accepted for treatment and those who will not on the basis of recovery potential. As an agency in receipt of public funds, The Foundation's responsibility (indeed, the individual responsibility of each treatment worker) is not just to the patient who demonstrates a high probability for recovery, but to all who seek treatment, including those whose problems seem to militate overwhelmingly against a favorable response. The use of a prognostic index is in dealing more insightfully with the question of which patients will be encouraged to continue with the out-patient treatment as described and which will be referred to other and (hopefully) more appropriate forms of therapy. Second, in identifying those patients who do not respond favorably to treatment, it should force careful examination of why. A prognostic index helps in pointing out and underlining the limits in a treatment program. In prompting the question of why the clinic is ineffective in treating certain individual or kinds of individuals, it can be used in directing treatment planning and in establishing policy to

develop more adequate techniques. In other words, a prognostic index achieves perhaps its greatest value when it contributes to that activity which would make it obsolete.

In the specific sense of applicability, an index to predict response should be administerable in the beginning stages of treatment. Therefore, it should have reference to material readily obtainable in the first or second interview, which in most instances precedes the recording of an elaborate case history, psychometric workup, or psychiatric consultation. For that matter, it was expected that in the treatment records only a very few psychiatric diagnoses and psychometric results would be available[1], and that a minimum of such assessments will exist in the future[2]. An attempt to develop a

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1 In the final sample of 120 treatment records, there were 6 Strong Interest tests, 4 Rorschach tests, 3 Wechsler-Bellevue Intelligence tests, 2 Thematic Apperception tests, and 1 Machover Draw-a-person test. Results of psychiatric consultations were recorded in 4 of the treatment records and interviews by the psychiatrist were conducted with 2 of the patients concerned. These psychometrics and psychiatric observations were distributed among 13 of the files.

2 Psychological testing is thought to have limited use in the treatment program. It is suspected that alcoholics have a strong resistance to being "bugged", and it is feared that testing enhances resistance to treatment. Because patients are seen for short term treatment usually (in 1955 the mean number of interviews per patient was 11; in 1956, 10.2; in 1957, 13.3; in 1958, 14.7)

prognostic index from material which generally disregards psychological function and personality structure may seem like a futile task. Still the need for maximum predictive value should be combined with maximum applicability (and no precedent demonstrating that such a task was impossible had been found).

Within the context of these considerations, three hypotheses were formulated and are stated as:

I. That there are significant and measurable differences between male[3] alcoholics subjected to out-patient treatment who:

(1) recover;

(2) do not recover.

II. That a number of these differences are of such a nature that they may be identified easily by an interviewer in the earliest stages of treatment without prolonged investigation.

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testing may not contribute sufficiently toward the therapeutic goals to justify its use except in special and rare circumstances. In fact, psychometrics have been utilized less frequently as the treatment program develops. At the Edmonton clinic, the total numbers of tests administered were: 104 in 1955, 22 in 1956, 5 in 1957, and none in 1958.

3 Appropriate to the magnitude of a study of this nature, it was decided to restrict the investigation to male patients only (See Chapter III on Selecting the Sample)

III. That these identifiable differences are of sufficient number and of such significance that they may be employed in the preparation of an index that will predict a patient's response to treatment.

CHAPTER II

IMPRESSIONS AND EARLIER FINDINGS CONCERNED WITH PROGNOSIS IN THE TREATMENT OF ALCOHOLISM

Tested and untested ideas exist concerning prognostic factors in the treatment of alcoholism. Fairly common assumptions are that the younger the patient and the earlier in its progress is his illness, the better are his chances for recovery. These are opposed by the equally common beliefs that youthful patients do not respond favorably and that alcoholics need to 'be hurt enough and hit bottom' (progress far in the condition) before they are sufficiently motivated to utilize therapy. Frequently put forward is the idea that female alcoholics do not have good prognoses for recovery in comparison to their male counterparts. Often it is felt that the presence of identifiable psychopathology (whatever its severity) in addition to alcoholism in an individual makes recovery more difficult than for another where alcoholism is the only adjustment problem observed. Likely all treatment workers have drawn conclusions about the limited chances for recovery of a sociopathic patient being treated for alcoholism. Considered at their very best, these views may be but generalized clinical impressions.

Five writings are herein cited that yield more than generalized clinical impressions and tend to test some of the above mentioned assumptions. These writings are scattered over a time span from 1946 to 1958 and have reference to five distinct treatment situations.

First, in 1946, on the basis of response to treatment carried out at a "rehabilitation farm", C.H. Durfee concludes that a patient's drinking history is not significant, but that his "attitude" toward his drinking problem is. Correlated with success are: the presence of insight, being over 40 years of age, and demonstrating a history of "accomplishment and some stability" (8).

Second, from a study initiated in 1952 at the Menninger Clinic, using hospitalized male patients, the findings are that: the ability to establish and maintain a close relationship with the therapist and hospital is correlated with a favorable prognosis while the prognosis for aggressive patients who used their aggression to ward off close ties was less favorable (40).

Third, in 1954, a study based on the results of a counselling center servicing derelicts ("homeless alcoholics") indicated that the "success group" had "more intact social relationships and

inner resources". These were enumerated as: "1. is married; 2. occupation was skilled, service, professional, or clerical; 3. was attending church; 4. recognizes he is an alcoholic; 5. was referred from the A.A. Detroit House of Correction or police; 6. did not ask for loan of money; 7. did not need help in securing shelter; 8. counsellor's initial impression was 'sounds good'" (39).

Fourth, in 1957, the results in a follow-up study on alcoholic patients committed to a government mental hospital show that a "good work history" is correlated with a good response. Those who began drinking prior to the age of 25 and who were committed to the hospital at a younger age tended to remain unimproved (the average age of the "improved" group was 48.8 years, of the "unimproved" group, 38.8 years) (31).

Fifth, in 1958, D.F. Mindlin reported the following results obtained in a study of alcoholic patients treated at a psychiatrically oriented out-patient clinic. Factors correlated with success were: married; good economic resources; usual occupation, skilled, clerical, sales, or professional; having under 5 arrests; displaying a good motivation, having a demonstrated intellectual function in the superior or very superior range; having a diagnosis

of obsessive-compulsive, and; a Rorschach "sign balance" of 1 or better. Factors correlated with lack of success were: separated or divorced; having fair or poor economic resources; unskilled usual occupation; 20 or more arrests or prolonged incarceration; displaying only a fair or poor motivation; intellectual functioning of below average or defective; diagnosis of hysteria, schizophrenia, organic involvement or sociopath, and; a Rorschach "sign balance" of -2 or worse (25).

CHAPTER III

PROCEDURE

In this chapter, the method of selecting the treatment records for study will be described, followed by a presentation of the statistical procedures employed.

Selection of the Sample

All the data used in this study have been obtained from the treatment records (patient files) of the Edmonton clinic of The Alcoholism Foundation of Alberta. A preliminary survey confirmed the suspicion that many of the records would yield only vague and inconsistent data. Of the complete total of 2,472 files available at the time of selection, a sample of 120 were chosen for examination. The selection aided in reducing the problems of unreliable and all too sketchy material. Seven steps were undertaken in selecting the final sample.

I. At The Foundation it is and has been the practice to establish a file on "every known alcoholic, regardless of the source or extent of the information". Files are divided into three classes.

"(a) Enquiries

'Enquiry' status is assigned to problem drink-

ers known to The Foundation as the result of contact with family, friends, employers and others by interview, correspondence, telephone or other non-patient contact.

(b) Applicants

'Applicant' status is assigned to problem drinkers who have been interviewed by a member of treatment staff at The Foundation or where the interview outside The Foundation is at the patient's request.

(c) Cases

'Case' status may be assigned to problem drinkers after a minimum of three reasonably consecutive sober treatment interviews. All patients who have had five reasonably consecutive sober treatment interviews, and have further interviews scheduled, must be assigned case status." (1)

It was decided to restrict this study to files that had become case status. There were three reasons for this restriction: (i) almost without exception, these files contain the most complete patient information; (ii) case status files more than the others can be

considered to be on patients who have been meaningfully exposed to the described out-patient treatment; (iii) it is only on case status patients that the Foundation workers are required to make or attempt to make regular (once every 6 months) follow-up contacts resulting in a continuing evaluation of a patient's response to treatment.

II. On the basis of the above mentioned follow-up contacts and other information, each patient who has achieved case status is classified as to his progress and is assigned one of the following 5 progress categories.

"(a) Very Good Recovery

This category may be assigned following a minimum of twelve months continuous sobriety plus marked improvement in social, vocational and marital stability.

(b) Progressive Recovery

This category may be assigned following a minimum of six months continuous sobriety plus improvement in one or more other areas.

(c) Partial Recovery

This category may be assigned where drinking has been markedly reduced, and a sincere effort is being made to achieve further reduction in the amount and frequency of

consumption providing there is apparent improvement in another area.

(d) Unimproved

This category is assigned when the patient fails to persist in treatment and/or is unsuccessful in attaining one of the defined levels of recovery.

(e) Other Problems

This category is assigned where the existing treatment facilities and techniques may not be successfully applied by reason of mental abnormality, deterioration or character disorder." (1)

It was decided to further restrict the study to include only those case files on patients classified as Very Good Recovery and Unimproved[1]. In so doing there are obtained 2 contrasting groups of files, yielding information on patients, subjected to similar treatment and regarded as treatable, some of whom 'recover' and some of whom do not 'recover'.

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1 Legitimate questions may arise as to the adequacy of the progress categories. Since the focus at this point of the study was on predicting improvement rather than rating improvement, the acceptability of the clinic's criteria for classification was assumed.

Of these 2 groups[2], only those files were ultimately chosen for examination if they met the following additional requirements, which reduced their numbers even further.

III. They had to be on male patients only. In accordance with the proportions of this investigation, all files on female patients were excluded. The ratio of male to female patients during the period of operation under consideration was roughly 10:1. The ratio of white to non-white patients during this period was roughly 35:1. The problem of whether or not to include any non-white patients in the study was conveniently 'solved' by the fact that all such files were screened out by one or other of the 7 steps.

IV. They had to be on patients whose treatment was initiated between the dates of April 1st, 1954 and September 30th, 1957 (inclusive). At the time this selection was made (November, 1958) files had been established on patients beginning in July, 1953 and up to the time of selection. This choice of dates was not arbitrary. The period from the beginning of operations to April, 1954 was characterized by rapid modification of treatment approaches,

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2 hereinafter termed Recovery group and No Recovery group.

undetermined and undeclared policy, frankly trial and error methods, and (for part of this time) the absence of trained direction and supervision. Recording was even less standardized then than later. To exclude records from this initial period of operation would aid in restricting the examination to a period wherein treatment would have some degree of homogeneity. The latter limit was chosen so that a full year had elapsed between the time a meaningful treatment relationship had been established and the time of the study, time that is necessary to evaluate response to treatment.

V. They had to be on patients who had been drinking within three weeks prior to their entry into the clinic. Certain files were on alcoholics who had already achieved some considerable length of sobriety but had sought Foundation help for some other adjustment or environmental problem. The study is concerned with response to treatment for alcoholism.

VI. They had to be on patients who had at least five counselling sessions. A minimum quantitative measure of treatment had to be decided upon in addition to that implicit in being assigned case status as a basic criterion of meaningful exposure[1]

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1 That a patient recovers from alcoholism after he

to out-patient care. It was hoped to make the criterion consist of at least seven counselling interviews, medical assessment and/or treatment, and at least four group therapy sessions. This would have resulted in having fewer than 100 files in the sample, thus it was finally determined that a minimum of five counselling interviews would be required with no requirements in terms of group attendance or medical contact.

VII. They had to be on those patients upon whom (a) reliable follow-up information had been gained for at least a year subsequent to their treatment and for whom (b) the most recent follow-up information as to their progress had been within a year.

Exercising these requirements, a sample of 120 treatment records were selected[2]. Sixty of these were on patients who had achieved "Recovery", sixty were on patients who had achieved "No Recovery".

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seeks Foundation treatment does not mean he recovers because of Foundation treatment. It could be argued that, the larger the minimum unit of exposure to treatment represented in the study, the greater is the likelihood that treatment was 'meaningfully' related to improvement rather than the experience of treatment merely occuring coincidentally with recovery.

2 Actually, the sampling procedures left 121 files ---61 in the Recovery group and 60 in the No Recovery group. By merely omitting one of the

To test the question of how the 2 groups of files were distributed over the time span of $3\frac{1}{2}$ years of treatment encompassed in the study, the total sample of 120 were arranged in chronological order of the date of the patient's entry into treatment. The sample was then divided into 4 quarters of 30 files each and the number of Recovery and No Recovery files in each quarter was counted. Results:

first quarter --- 14 Recovery, 16 No Recovery;

second quarter --- 15 Recovery, 16 No Recovery;

third quarter --- 16 Recovery, 14 No Recovery:

fourth quarter --- 15 Recovery, 15 No Recovery.

Statistical Procedure

The selected sample held a disordered conglomerate of information. A preliminary examination of the files suggested that most of the items of information could best be organized into dichotomous categories, (i.e., the presence of a feature versus the presence of an alternative and/or contrasting feature and the frequency of the appearance of each of these in the Recovery and No Recovery groups).

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treatment records in the Recovery group (randomly chosen), purposes of simplicity were served and at no appreciable cost to the value of the study. (The omission of the one file could, perhaps, be regarded as an eighth step in selection).

To determine the relationship between recovery and each of the items considered, tetrachoric correlations were calculated[1].

Not all of the data are of a dichotomous nature; some should be regarded as continuous (e.g., age, education). To maintain consistency the continuous variables were reduced to dichotomous ones by finding the medians[2] (of the total group--N=120) and creating categories of "over" and "under" the medians.

Following the calculations of r_t, the significance of each correlation was tested by obtaining a "z" score[3]. A correlation having a "z"

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1 The use of tetrachoric r is outlined and illustrated in Garrett (13). See Appendix "B". For an illustration of the fourfold table from which tetrachoric r is calculated and for further elaboration concerning the application of this procedure, see Appendix "B" of the present study.

2 The formula used for calculating the median is as reported in Garrett (13):

$$Mdn = 1 = \left(\frac{\frac{N}{2} - F}{fm} \right) i$$

3 The procedure for obtaining a "z" score consists of the following 3 steps:

(1) calculate SE_r by $SE_r = \sqrt{\frac{(1-r^2)}{N-1}}$;

(2) translate SE_r into SE_{r_t} by $SE_{r_t} = SE_r \times 1.5$ (13a)

(3) calculate "z" by $"z" = \frac{r_t}{SE_{r_t}}$

score of under 2.0 was regarded as not significant (insufficiently related to recovery to have any predictive value)[1].

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1 For the suggestion of translating continuous variables into dichotomous ones, and for the method of obtaining a "z" score to test the significance of each correlation, I am indebted to Professor C. Uhl of the Department of Psychology of the University of Alberta.

CHAPTER IV

RESULTS

It is abundantly clear that the three hypotheses are not independent assumptions. They are, in fact, propositions in order from general to specific, each succeeding one being reasonable only if the preceding one(s) can be confirmed[1]. It would seem appropriate to present the results in the same order, offering first that evidence which tests the first hypothesis, next that evidence concerned with the second and finally that evidence relevant to the third. It was considered wiser and more economical to combine the findings having relevance to all three propositions and present them together. These results will form the first and major section of this chapter and be termed "principal findings". Following this is a second section (which includes material having some relevance to the first and/or second propositions) termed "additional findings".

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1 An alternative interpretation is that there is but one hypothesis with three parts or levels.

Part I - Principal Findings

Data obtainable were organized into three areas: I. First contact data; II. Personal data; III. Drinking data.

I. First contact data

Herein each file was examined to determine whether:

(1) the referral to treatment implied voluntary application for treatment or involved coercion;
(2) the first contact concerning the patient was made by the patient or some other individual;
(3) the first treatment contact with the patient occured in the clinic or outside the clinic;
(4) the patient was alone when he first arrived at the clinic or was accompanied;
(5) the patient's physical condition could be described as unimpaired or impaired.

II. Personal data

Herein each file was examined to determine whether:

(6) the patient's age was above that of the median age of the total sample or below;
(7) the patient's educational level was above that of the median educational level of the total sample or below;

(8) the patient's religious identification was Protestant or Catholic;

(9) the patient was married and living with his wife at the time of entry into the clinic or was of some other marital status;

(10) the patient was a property owner or did not own property;

(11) the patient was employed at the time of entry into the clinic or was unemployed;

(12) the patient was fully able to work or suffered some physical disability rendering him less than completely able to work;

(13) the patient's regular occupation was of a high classification or low.

III. Drinking data

Herein each file was examined to determine whether:

(14) the patient's entry into the clinic marked the first time he had been treated for his drinking problem or if he had previously received some form of treatment;

(15) the age of the patient's first drinking experience was above the median (age) of the total sample or below;

(16) the number of years of social drinking (time span between first drink and beginning of

problem drinking) was above the median (years) of the total sample or below;

(17) the age at onset of problem drinking was above the median (age) of the total sample or below;

(18) the number of years that drinking had been a problem was below the median (years) of the total sample or above;

(19) the total number of years of drinking (from the first drink to entry into the clinic) was below the median (years) of the total sample or above;

(20) the patient's drinking problem was characteristic of the early stages of alcoholism or the late stages;

(21) the patient's drinking pattern was of the steady variety or episodic variety.

A total of twenty-one items were made available for statistical tests of significance. They will be reported upon separately, the results presented in table form, along with the calculated values of r_t and "z" and the rank[1] of each item.

I. First Contact Data

(1) Application for Treatment: Voluntary vs. Under Coercion

Diverse circumstances precede and surround the patient's application to The Foundation for treat-

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1 the rank order from 1 to 21 corresponding to the decreasing values of r_t and "z".

ment. Different conscious and unconscious purposes may be served by a patient coming to the clinic. An irate wife may be placated, a job may be retained, or probation requirements may be fulfilled by reason of attendance at The Foundation. Yet, at times, the only apparent motivation displayed by some patients is a 'desire to get well' (36,37).

Files in this study were examined to discover evidence of which patients approached The Foundation with the belief that if they did not do so, they would immediately suffer some tangible loss----a case of 'either go to the clinic or job will be lost----separation proceedings will be pursued----charges of non-support will be pressed----and so on'[1]. If such evidence was available in the file, that patient was considered to be under coercion. If there was not such evidence in the file, the patient was regarded as being a voluntary patient.

APPLICATION FOR TREATMENT	No Recovery	Recovery	Totals
Voluntary	46(77%)	51(85%)	97
Under Coercion	14(23%)	9(15%)	23

r_t = .191 "z" = 1.448 rank = 13

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1 A distinction was attempted between such situations

The evidence indicates only an indifferent relationship between voluntary treatment and recovery, less than might be anticipated. As the finding stands, the reasons why patients seek treatment (direction of motivation) seem to have little bearing on the outcome of therapy. Two alternative interpretive comments may be in order. First, the evidence may be insufficient and misleading. Many more in the sample may have come in under coercion but were not detected by the counsellor and/or recorded as such in the treatment record. Second, the statement made by Mindlin (25) that "motivation stands out as the aspect which is perhaps the most important in initiating treatment but is also the most subject to change with therapy" might have relevance to the present finding in terms of the fact that the sample includes only those patients who remained in treatment up to a minimum of 5 interviews. If a patient persists in treatment for that length of time, the direction of his motivation thereafter may have little in common with the purpose for which he initially came to the clinic.

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as listed and other more nebulous threats to the alcoholic's person or circumstances, stated and implied, which may hover constantly on the periphery of an alcoholic's consciousness but rarely seem to be taken seriously by him.

(2) First Contact By: Patient vs. Other

In the study sample, first contact with the clinic was established in 53% of the cases by the patient himself. In the remaining 47% the first such contact was established by concerned relatives, friends, employers or others prior to the patient's initial contact.

1.

FIRST CONTACT BY:	No Recovery	Recovery	Totals
Patient	27(45%)	36(60%)	63
Others	33(55%)	24(40%)	57

r_t = .237 "z" = 1.855 rank = 8

A slight relationship between recovery and the establishment of first contact by the patient is indicated. Although the correlation is not significant, this does not disallow the speculation that the ability to 'independently' seek treatment may be related to a favorable response and, conversely, that those who require their way into the clinic to be paved by others may be less promising candidates for treatment.

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1 No Recovery figures are placed left of the Recovery figures in each of the 21 tables to parallel the arrangement within the fourfold table from which tetrachoric r is calculated (see Appendix "B").

(3) First Contact At: In the Clinic vs. Outside

The first treatment interviews usually occur at The Foundation's clinic. A patient may simply arrive for an unscheduled interview or he may telephone for an appointment or precede his arrival by a letter of enquiry or introduction. On some occasions, the first treatment interview may take place in the patient's home, in a hospital, or while a patient is in custody.

FIRST CONTACT AT:	No Recovery	Recovery	Totals
In the Clinic	49(82%)	54(90%)	103
Outside	11(18%)	6(10%)	17

r_t = .232 "z" = 1.797 rank = 10

Being interviewed first at the clinic is seen statistically as just slightly related to recovery; the correlation is not significant. The minor disproportion observed is clarified by the fact that 10 of the No Recovery group were first interviewed while in custody, whereas only 4 of the Recovery group were first interviewed in such circumstances. It is more likely that any observed relationship to response under this item is not explainable in terms of 'in or out' of the clinic, but in terms of unfavorable factors associated

with the incarcerated alcoholic (18,28).

(4) First Contact With: Alone vs. Accompanied

Patients may present themselves for treatment unaccompanied or in the company of a relative, friend, A.A. 'sponsor' or other.

FIRST CONTACT WITH:	No Recovery	Recovery	Totals
Alone	32(53%)	37(62%)	69
Accompanied	28(47%)	23(38%)	51

r_t = .134 "z" = .997 rank = 16

Only a negligible relationship exists between recovery and arriving unaccompanied for the first interview. Of the 5 items relevant to first contact, this one is found to have the least statistical significance.

(5) General Physical Condition on First Contact: Unimpaired vs. Impaired

Each patient in the sample was assessed at first interview as to whether he was in good or fairly good physical condition or whether his condition was impaired by intoxication, hangover, or illness.

CONDITION ON FIRST CONTACT	No Recovery	Recovery	Totals
Unimpaired	34(57%)	46(77%)	80
Impaired	26(43%)	14(23%)	40

r_t = .345 "z" = 2.860 rank = 6

A positive and significant correlation between recovery and arriving in an unimpaired physical condition is discovered. This item, perhaps more than any of the others thus far, may point out what a patient is seeking when he approaches treatment---whether he desires to obtain and maintain abstinence or whether he is seeking relief from immediate physical distress. Of some further interest is the discovery that only 4% of the Recovery group showed any degree of intoxication upon first interview, whereas 18% of the No Recovery group did. Arriving for a first interview while under the influence of alcohol could be a sign of belligerance, of regarding with contempt the act of seeking treatment[1], or demonstrate some inability to approach a new experience without the anxiety-reducing effect of alcohol.

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1 to which the treatment worker may respond by unconscious rejection of the patient.

Summary of First Contact Data

Of the 5 items related to the nature and circumstances of the patient's first contact, only one was found to be significantly correlated with recovery, namely: condition on first contact. A hazy picture begins to emerge of that patient most likely to recover. Desiring help to obtain freedom from the use of alcohol and to maintain this freedom, the individual himself initiates treatment contact at the clinic where he arrives unaccompanied and in an unimpaired physical condition. Although lacking in statistical proof, there is a suggestion that when the patient arrives for treatment he is already motivated toward recovery from his alcoholism.

II. Personal Data

(6) Age: Above Median vs. Below Median

The ages of the patients at the time of entry into the clinic of the Recovery group ranged from 23 years to 67 years (with a mean age of 42.017 years). In the No Recovery group, the age range was 24 years to 61 years (with a mean age of 39.317 years).

Tabulating the frequency within the two groups of files of those that fall above or below the median of the total sample (Mdn. = 39.857) we find:

AGE	No Recovery	Recovery	Totals
Above Median	27(45%)	33(55%)	60
Below Median	33(55%)	27(45%)	60

r_t = .162 "z" = 1.214 rank = 14

Only an indifferent relationship is demonstrated between recovery and increased age. It is interesting to note that age is found to be a less significant factor in the present study than in the first and fourth writings (8,31) cited earlier in Chapter 2.

(7) Education: Above Median vs. Below Median

Frequently within the files examined there was a mere numerical indication of the education of the patient---e.g. "grade eleven". Infrequently was it possible to find elaborations sufficient to determine if the patient had successfully completed or had only partly completed such a grade. Thus these numbers as such were tallied, i.e., "education" was translated into simple numerical scores. The 'education score' does not mean years of study in that a patient repeating 2 grades was not credited with two additional scores. Formal education follow-

ing high school was also considered numerically so that a patient with a three year Bachelor's degree was given a score of 15.

In the Recovery group the mean score was 11.0, with a range from 7 (grade 7) to 20 (8 years of University education). In the No Recovery group the mean score was 9.95, and the scores ranged from 5 (grade 5) to 17 (5 years of University). The median of the total sample (N=120) was 10.55.

EDUCATION	No Recovery	Recovery	Totals
Above Median	26(43%)	34(57%)	60
Below Median	34(57%)	26(43%)	60

r_t = .208 "z" = 1.588 rank = 11

A slight relationship is evidenced between recovery and increased education, although the correlation must be regarded as not significant. The emphasis in treatment at the clinic is on verbal exchanges between patient and counsellor, which could conceivably put the patient with a low educational level at an unfortunate disadvantage.

(8) Religion: Protestant vs. Catholic

All but 1.3% of the total Foundation case-

load identify their religious affiliation or background as falling into the main categories of Protestant or Catholic. None of the 120 files of present concern are from this 1.3%. This facet of the study may be of minimum value in that it was not possible to establish the strength of past or present religious ties, practices, affiliations or conflicts (32). All that was available was mere religious 'identification'---patients declaring they were "Protestant" or "Catholic".

RELIGION	No Recovery	Recovery	Totals
Protestant	47(78%)	52(87%)	99
Catholic	13(22%)	8(13%)	21

r_t = .202 "z" = 1.539 rank = 12

A slight relationship is discovered to exist between recovery and being of Protestant religious identification, but the correlation must be regarded as not significant.

(9) Marital Status: Married vs. Not Married

About 2/3 of the patients in the sample were married and living with their wives at the time of their initial treatment contact. These are des-

ignated as married. The remaining 1/3, either single, separated, divorced or widowed, are designated as not married.

MARITAL STATUS	No Recovery	Recovery	Totals
Married	31(52%)	48(80%)	79
Not Married	29(48%)	12(20%)	41

r_t = .4837 "z" = 4.0672 rank = 3

Recovery is positively and significantly correlated with being married. Additional details of the findings regarding marital status lend greater significance to this item in that: (a) 3 of the 4 patients in the Recovery group who had never married up to the time of their entry into the clinic have subsequently become married, whereas all of the 10 patients in the No Recovery group who had never married remained single up to the time of this investigation; (b) 6 of the 8 patients in the Recovery group who had been married but at the time of entry into the clinic were assigned not married status because of being separated, divorced or widowed, have subsequently become reconciled or have remarried, whereas only 9 of the 19 patients in the No Recovery group who were separated, divorced

or widowed have subsequently become reconciled or have remarried.

(10) Owning Property: Property Owners vs. Those Not Owning Property

Files were classified as to whether the patient could be designated as a property owner or not. Property owners are herein defined as individuals who owned or were buying their residences, or owned other residential properties. Individuals not owning property includes those living in rented houses, apartments, suites, and rooms, or residing in camps or dormitories.

OWNING PROPERTY	No Recovery	Recovery	Totals
Property Owners	15(25%)	33(55%)	48
Not Property Owners	45(75%)	27(45%)	72

r_t = .510 "z" = 5.036 rank = 2

Recovery is positively and significantly correlated with property ownership as described. Being a property owner does not necessarily represent financial solidarity nor clearly indicate economic resources. Perhaps as a crude indication of an investment in one's community it would

be traceably connected to residential stability.

(11) Employment Status: Employed vs. Unemployed

These are fairly comprehensive categories. No distinction is made between self-employed individuals and employees. The unemployed category does not distinguish between the seasonal worker between jobs and the individual whose regular occupation is of a steady nature and for whom it is an unusual occurrence to be unemployed. There were no retired individuals in the sample.

EMPLOYMENT STATUS	No Recovery	Recovery	Totals
Employed	31(52%)	42(70%)	73
Unemployed	29(48%)	18(30%)	47

r_t = .254 "z" = 1.982 rank = 7

There is a relationship between recovery and being employed at the time of entry into treatment. However the correlation must be considered not significant. Once again as in the item concerned with religion, the material available is unfortunately limited in scope and detail. It would seem likely that a patient's previous vocational stability, i.e., longest period of employment, rate of promotions,

et cetera, would be important in a study of factors linked with recovery, and would be information obtainable early in treatment, but such evidence was generally lacking in the treatment records.

(12) Ability to Work: Impeded vs. Unimpeded

Patients were assessed as to their "workability" taking into account the presence of phyical disabilities rendering the patient capable of only light or special work. Files in the sample were classified in this regard as to whether the patient could be considered as impeded or unimpeded.

ABILITY TO WORK	No Recovery	Recovery	Totals
Impeded	7(12%)	10(17%)	17
Unimpeded	53(88%)	50(83%)	103

r_t = .146 "z" = 1.090 rank = 15

The correlation, though negligible, does imply a trend in the opposite direction than might be anticipated. Apparently, the presence of physical impediments interfering with an individual's vocational functioning does not interfere with his ability to recover from alcoholism.

(13) Occupational Classification: High vs. Low

Each patient's regular occupation was classified as high or low in the following manner. Those patients considered as professional, or holding executive, or managerial positions were classified as high. Sales and clerical workers, skilled, semi-skilled and unskilled workers were classified as low.

OCCUPATIONAL CLASSIFICATION	No Recovery	Recovery	Totals
High	6(10%)	22(37%)	28
Low	54(90%)	38(63%)	92

r_t = .545 "z" = 5.659 rank = 1

A positive and significant correlation between recovery and having a high occupational classification is discovered. On the basis of the described dichotomy, occupational classification proved to have the most significant relationship of the twenty-one items correlated with successful response to treatment.

Summary of Personal Data

Of the 8 items of personal data, 3 were found to be significantly correlated with recovery,

namely: having a high occupational classification, owning property, and being of married status. These items, of principally social or economic reference, amplify the picture of that patient most likely to recover as a man having 'achieved', at least in terms of common stereotypes denoting "success". Stability and conformity with generally prevailing cultural expectation are implied in the findings. It is possible to speculate that intelligence and 'resourcefulness' (39) might also be positively correlated with recovery. The findings permit such speculations but cannot be used to confirm them.

III. Drinking Data

(14) Previous Treatment: No Previous Treatment vs. Previous Treatment

Inquiry is made of the patients during their initial contact if they had previously sought or received treatment or help for their drinking problems. Some report that their arrival at the clinic is the first experience in seeking help (18% of the sample). Previous sources of treatment vary and include hospitalization, pastoral counselling, and Alcoholics Anonymous, among others. It can be assumed that previous treatment measures have been to some degree unsuccessful

since the study includes only those patients who had been drinking up to three weeks prior to their entry into The Foundation.

PREVIOUS TREATMENT 'ATTEMPTS'	No Recovery	Recovery	Totals
No Previous Treatment	8(13%)	14(23%)	22
Previous Treatment	52(87%)	46(77%)	98

r_t = .236 "z" = 1.826 rank = 9

A small relationship is shown to exist between recovery and seeking treatment for the first time. The correlation is not significant. The evidence was not always clear but there appeared to be a disproportionately large number in the No Recovery group who had sought previous treatment many times. Had it been possible, a more meaningful dichotomy might have been between those who had no or few previous treatment attempts and those who had many.

(15)(16)(17)(18)(19) Chronological Development of Drinking

Certain facts and estimates on the chronology of the patient's drinking histories were available:

the age at which drinking began;

the age at which problem drinking began;

the difference between the above two ages (years of social drinking);

the duration of problem drinking before entry into the clinic;

the duration of total drinking history until entry into the clinic.

Table I

Comparative Findings of Chronology of Drinking Histories

		NO RECOVERY	RECOVERY
AGE AT FIRST DRINK	Mean Age	20.5	19.9
	Range of Ages	13-40	11-32
	Median Age (Total Sample)	20.33	
YEARS OF SOCIAL DRINKING	Mean Years	10.7	14.2
	Range of Years	2-32	1-40
	Median Years (Total Sample)	11.35	
AGE AT ONSET OF PROBLEM	Mean Age	30.9	33.9
	Range of Ages	16-56	15-57
	Median Age (Total Sample)	30.86	
DURATION OF PROBLEM DRINKING	Mean Years	8.5	8.2
	Range of Years	1-20	1-25
	Median Years (Total Sample)	8.38	
DURATION OF TOTAL DRINKING HISTORY	Mean Years	19.2	22.4
	Range of Years	6-47	8-50
	Median Years (Total Sample)	20.36	

(15) Age of First Drinking Experience: Above Median vs. Below Median

AGE AT FIRST DRINK	No Recovery	Recovery	Totals
Above Median	30(50%)	30(50%)	60
Below Median	30(50%)	30(50%)	60

r_t = .000 "z" = 0.000 rank = 20

There is no statistical evidence of any relationship between response to treatment and the age of the first drinking experience.

(16) Years of Social Drinking: Above Median vs. Below Median

For the majority of patients, a number of years of ordinary ('safe' or 'social') drinking occurs before the beginning of problem drinking.

YEARS OF SOCIAL DRINKING	No Recovery	Recovery	Totals
Above Median	27(45%)	32(53%)	59
Below Median	33(55%)	28(47%)	61

r_t = .131 "z" = .974 rank = 17

The Recovery group shows a slightly higher proportion of patients with a longer pre-pathological

drinking career. The correlation, however, is negligible. This finding lends small support to the view which associates an alcoholic's inner resources and maturity with a lengthy history of social drinking prior to the onset of alcoholism (6,17).

(17) Age at Onset of Problem: Above Median vs. Below Median

AGE AT ONSET OF PROBLEM	No Recovery	Recovery	Totals
Above Median	30(50%)	30(50%)	60
Below Median	30(50%)	30(50%)	60

r_t = .000 "z" = 0.000 rank = 21

Although the mean ages at beginning of problem drinking of the two groups vary (No Recovery group = 30.9; Recovery group = 33.9), suggesting that a later appearance of alcoholism is linked with recovery, there is no correlation evidenced when dichotomizing in the above manner and basing calculations upon the use of the median.

(18) Duration of Problem Drinking: Below Median vs. Above Median

DURATION OF PROBLEM DRINKING	No Recovery	Recovery	Totals
Below Median	29(48%)	31(52%)	60
Above Median	31(52%)	29(48%)	60

r_t = .052 "z" = .381 rank = 19

There is no relationship demonstrated between recovery and the duration of problem drinking[1].

(19) Duration of Total Drinking History: Above Median vs. Below Median

DURATION OF TOTAL DRINKING HISTORY	No Recovery	Recovery	Totals
Above Median	25(42%)	36(60%)	61
Below Median	35(58%)	24(40%)	59

r_t = .106 "z" = ,828 rank = 18

This item, of course, is simply the sum of items (16) and (18). It is nonetheless included but does not demonstrate any relationship of further importance.

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1 The r_t of .052 shows a relationship of no greater magnitude than that of having an even file number as opposed to an odd file number! (In the sample a tetrachoric r of .053 exists between being assigned an even file number and recovery.)

The correlation between recovery and a lengthy total drinking history is positive but not significant.

(20) Stage of the Illness: Early vs. Late

Alcoholism is a progressive condition in which the typical pattern or appearance of symptoms[1] tends to parallel any given alcoholic career. From evidence in the files, judgements were made as to whether the patient's drinking was characteristic of early stage or late stage alcoholism.

STAGE OF THE ILLNESS	No Recovery	Recovery	Totals
Early	12(20%)	27(45%)	39
Late	48(80%)	33(55%)	81

r_t = .412 "z" = 3.624 rank = 5

There is a positive and significant correlation between recovery and early stage alcoholism[2].

(21) Drinking Pattern: Steady vs. Episodic

Alcoholics can be classified in terms of

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1 See Appendix "C"

2 This finding may be of special interest to The Foundation which reports that with each succeeding year "there is evidence to suggest that those seeking treatment are doing so at earlier stages in the progression of their illness" (1).

their pattern of drinking. Fox and Lyons (12) describe two types of drinking patterns: those characterized by loss of control of drinking, or by inability to stop drinking. Jackson (17) used the following categories: solitary and sociable; belligerent and non-belligerent; periodic, steady, and changing. A rather elaborate classification has recently been detailed by Marconi (24). A not-too-scientific (but certainly descriptive) classification often used by alcoholics themselves is "careful drunk" and "sloppy drunk".

For this study, files were classified (on the basis of the pattern of drinking the patient displayed at the time of entry)[1], as to whether the pattern was or was more characteristic of; (a) steady, (b) episodic. A steady drinking pattern features a gradual increase in frequency of drinking until it becomes daily (or almost daily) and excessive. An episodic drinking pattern features alternating periods of excessive drinking and of abstinence or moderation.

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1 No attempt was made to determine if the assigned category was representative of a stabilized drinking pattern or a transitional phase within the total alcoholic career.

DRINKING PATTERN	No Recovery	Recovery	Totals
Steady	9(15%)	21(35%)	30
Episodic	51(85%)	39(65%)	90

r_t = .394 "z" = 3.407 rank = 5

There is a positive and significant correlation between recovery and a steady drinking pattern.

Summary of Drinking Data

Of the 8 items of drinking data, 2 were found to be significantly correlated with recovery, namely: that of early stage alcoholism and a steady pattern of drinking. The picture of that patient most likely to recover is finally elaborated as the man whose life and being has not been too disorganized by advanced alcoholism and episodes of uncontrolled drinking and who has likely not sought previous treatment for his drinking problem.

Table II

Summary of Factors Correlated with Recovery, ranked in decreasing value, and showing degree (r_t) and significance ("z") of relationship.

	r_t	"z"
1. high occupational classification	.545	5.659
2. property owner	.510	5.036
3. married and living with wife	.484	4.067
4. early stage alcoholism	.412	3.624
5. steady drinking pattern	.394	3.407
6. arriving in unimpaired physical condition	.345	2.860
7. employed	.254	1.982
8. first contact made by patient	.237	1.855
9. no previous treatment attempts	.236	1.826
10. first contact at clinic	.232	1.797
11. education above median	.208	1.588
12. Protestant	.202	1.539
13. voluntarily seeking treatment	.191	1.448
14. age above median	.162	1.214
15. vocationally impeded	.146	1.090
16. arriving at clinic unaccompanied	.134	0.997
17. duration of social drinking above median	.131	0.974
18. duration of total drinking history above median	.106	0.828
19. duration of drinking problem below median	.052	0.381
20. age at first drinking experience	.000	0.000
21. age at onset of drinking problem	.000	0.000

Narrative Sketch of a Patient Responding Favorably to Foundation Treatment

The patient came to The Foundation apparently motivated to obtain help in recovering from his alcoholism. He established the first Foundation contact himself. Treatment was initiated at the clinic where he arrived unaccompanied, sober and in an unimpaired physical condition.

The patient is 42[1] years of age; he has gone to grade 11 in school. He is a Protestant, married and living with his wife. A property owner, he is employed at the time of his entry into the clinic, although he may have some physical disability. He has a high occupational classification.

He has not sought previous treatment for his drinking problem. He began drinking at 20 years of age. Fourteen years of social drinking followed, problem drinking beginning at 34 years of age. The problem continued for 8 years until he sought Foundation treatment. His alcoholism has not passed the mid-point in the progression of the illness and is of a steady pattern.

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1 Mean numbers (rounded) are used in the 'sketches'.

Narrative Sketch of a Patient Not Responding Favorably to Foundation Treatment

The patient approached treatment with the threat of a specific loss if he did not do so. Some preliminary contact had been made with the Foundation by someone other than the patient before treatment was actually initiated. The patient was initially interviewed outside the clinic and when he first did arrive, he was accompanied and his condition was impaired from drinking or sickness.

The patient is 39 years of age; he has gone to grade 10 in school. He is Catholic and single, separated or divorced. He does not own his own home. He is unemployed at the time of his entry into the clinic, but not because of any physical disability. His regular occupation is of a low classification.

He has sought treatment before for his drinking problem. He began drinking around the age of 21. Fewer than 11 years of social drinking followed, problem drinking beginning around 31 years of age. The problem continued for 9 years up to his entry into The Foundation. His alcoholism has passed the mid-point in the progression of the illness and is of an episodic pattern.

Thus, of the 21 items analyzed, 6 meet the statistical requirements establishing them as being of sufficient significance to be of value in predicting treatment response. Those that remain of predictive value are (1) occupational classification (2) ownership of property (3) marital status (4) stage of alcoholism (5) pattern of alcoholism, and (6) physical condition at first contact.

The next step in developing a prognostic index from these findings would be to calculate the inter-correlations among these items. However, there are already the facts that there are but six items of predictive value, and none of the correlations (especially the last two) is particularly high. Relationship or overlap among some of the items is certain[1].

Therefore, without even pursuing the involved task of determining the net correlations to reduce further the number and/or the significance of the remaining items, it must be concluded that

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1 90% of the patients of the low occupational classification, for example, do not own their homes, while over 70% of the high occupational classification do. Any such overlap, of course, has a marked influence upon the validity of the relationship between any item and recovery. Home ownership is more related to occupational classification than it is to response to treatment.

the findings are insufficient upon which to build a valid index of prognosis. The present study has failed to achieve this goal.

Part II - Additional Findings

The foregoing has indicated certain relationships between the data examined and recoverability, and although the findings have proved insufficient in their present form to use as a basis for a prognostic index, the items considered still plead the virtues of being:

(1) generally objective, requiring few subjective interpretations on the part of the interviewer;

(2) generally obtainable in the initial stages of treatment. There are additional findings that have been kept separate from the main body of this study, some of which do not claim the above virtues or for other reasons remain peripheral to the central purpose. These are of interest, however, and are reported.

(1) Estimate of Somatotype

In the etiology of alcoholism, organic factors have been surmised by many (21,22,24,27,35), indicated by others (7,41), yet proven by none. The organic factors leading to (or resulting from) alcoholism are, of course, highly relevant to a

study concerned with prognosis. It was not possible within the scope of the present investigation to deal with this very important aspect. The nearest that this area was approached came about in giving a crude estimate of the somatotype of each of the patients in the sample.

This portion of the study was conducted in the following manner. Two of the treatment workers familiar with most of the patients in the sample agreed to assist in making these estimates. They first studied the concise outline of Sheldon's classification given by Cruze (5). After considerable discussion and estimates made singly and jointly of the somatotypes of other staff members (discreetly out of the latter's earshot), the work began. The total sample of 120 files was presented in order of file number. Thus the two workers did not always know for certain if a file came from the Recovery or No Recovery group. Estimates were made on the basis of recall and any relevant notes in the records (for example, the physician's notes, including weight when given). In certain instances, these estimates were checked with other counsellors when memory and notes completely failed.

No defence is made for the questionable quality of this method and these estimates. It was

hoped that if there is a relationship between somatotype and prognosis, a trend might appear lending encouragement to better study. The results, however, were that the mean estimate in the two groups are almost identical---approximately 3-4-3. No further examination of this area was planned or attempted; no finer statistical treatment of the estimates seems justified with such data.

(2) Subjective Assessment

The "assessment of men", has been described as, "basically the scientific art of arriving at sufficient conclusions from insufficient data" (25). If so, the prediction of a patient's progress from undefined clues, from the therapist's impression could be of significance. Each treatment worker at The Foundation has certain impressions of the kind of patient that responds well to treatment. However, the picture of the 'likely' patient in the mind of any one treatment worker, it might be expected, would be weighted by a combination of recent observations, the presence of unusual and obtrusive characteristics in the patient, and the worker's own conscious and unconscious preferences and prejudices. Such distortions might make a subjectively based pre-

diction of therapeutic outcome valueless.

Upon entry into the clinic, each of the patients in the sample were assessed in terms of their "attitude" (towards their problem and treatment) and the "impression" they created as to motivation and anticipated response to treatment.

ATTITUDE	No Recovery	Recovery	Totals
Good	26(43%)	38(63%)	64
Poor	34(57%)	22(37%)	56

$r_t = .319$

IMPRESSION	No Recovery	Recovery	Totals
Good	20(33%)	36(60%)	56
Poor	40(67%)	24(40%)	64

$r_t = .425$

There are positive and significant correlations between the counsellor's judgement of the patient's "attitude" and recovery; and between the "impression" created by the patient and recovery[1].

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1 See Appendix "D" for further material relevant to the question of a therapist's subjective predictions regarding recovery.

(3) Treatment Rendered

Of no immediate pertinence in predicting response to treatment but of more than passing interest are findings related to the quantity and nature of treatment rendered.

Number of Counselling Interviews. One of the criteria for selection of the sample was that each patient have at least five counselling interviews. In the Recovery group the number of interviews ranged from 5 to 65, with a mean number of 17.5 interviews. In the No Recovery group the range was 5 to 41; the mean was 11.3.

Attendance at Evening Groups. From somewhat uncertain evidence it was discovered that 87% of the Recovery group and 77% of the No Recovery group were recorded as having arrived at one or more of the evening group therapy sessions.

Examination by Physician. Not all patients are examined or treated by the clinic's physician. From the sample, 75% of the Recovery group were, 73% of the No Recovery group were.

Wives Interviewed. The Foundation emphasizes the importance of offering counselling services to the non-alcoholic spouse in order to aid the patient in his recovery. The sample files were examined for evidence that the wife of the married patient concerned had been interviewed at least once. Results: Recovery group, 61% of the wives had been

interviewed; No Recovery group, 64% of the wives had been interviewed.

A.A. Participation. The Foundation reports, "Throughout treatment, the patient is encouraged and aided to accept the essential long term support of Alcoholics Anonymous" (1). The files were inspected for evidence that the patient was either active in A.A. or accepted referral to A.A. (reported to have gone to at least one meeting on the basis of Foundation referral). Results: Recovery group, 95% of the files had such evidence; No Recovery group, 70% had.

(4) Indications from History and Counselling Notes

There are suggestions of further features linked with recovery that were found in the case histories and in the counselling notes. Because of the inability to establish the degree of correlation with recovery and the statistical significance of these features, it must be warned that in their present form they are of little prognostic value, but they can be considered as promising leads for further study.

Concerning the patients in the Recovery group, there appeared to be a high incidence of: somatic channeling of tensions; anxiety dealt with by obsessive-compulsive defense systems; free

verbalization and easy communication in interviews; high intelligence levels; features of persistency or determination in activities.

Concerning the patients in the No Recovery group, there appeared to be a high incidence of: marked disturbances in interpersonal relationships; hostile characteristics; dependency features; unstable early backgrounds; high psychotic potentials or features of character disorders; low levels of intelligence; histories of arrests; strong guilt feelings.

CHAPTER V

SUMMARY AND CONCLUSIONS

This study has been concerned with the factors that are linked with and presumably determine an alcoholic's response to treatment. Specifically it has sought to develop an index to predict therapeutic outcome of male alcoholics who seek out patient treatment at the Alcoholism Foundation of Alberta.

Data for the study, obtained from a sample of treatment records, provided evidence from which to test the following hypotheses:

I. That there are significant and measurable differences between male alcoholics subjected to out-patient treatment who:

(1) recover

(2) do not recover

II. That a number of these differences are of such a nature that they may be identified easily by an interviewer in the earliest stages of treatment without prolonged investigation.

III. That these identifiable differences are of sufficient number and of such significance that they may be employed in the preparation of an

index that will predict a patient's response to treatment.

The results of the investigation indicate that the following conclusions are warranted.

Hypothesis I appears to be upheld. The patients who recovered differ significantly from those who did not on 6 of the 21 items examined, namely: (1) occupational classification (2) ownership of property (3) marital status (4) stage of alcoholism (5) pattern of alcoholism, and (6) physical condition at first contact.

Hypothesis II would also appear to be confirmed in that each of the items listed are easily identifiable in the earliest stages by treatment.

Hypothesis III is neither sustained nor disproved. The findings were not sufficient upon which to prepare a prognostic index. However, there is no evidence to suggest that an enlarged investigation of improved quality and design could not do what this study has failed to do.

CHAPTER VI

EVALUATION OF THE STUDY AND RECOMMENDATIONS

Serious criticism can be levelled at the study. Among its limitations are the following three. First, is the questionable accuracy of the data. Although each treatment record was painstakingly checked to eliminate all internal inconsistencies, the final standard of accuracy still remained the information recorded in the file. Inaccuracies of patient reporting and counsellor recording[1] could have crept in and could not be entirely controlled. Second, is the results of the sampling procedures. Apart from its limited size, the final sample was not on male alcoholic patients seeking out-patient treatment, but on male "case status" patients who received a minimum of 5 counselling interviews. Third, the study lacks precision in that by its very nature it assumes that the patients were each subjected to identical forms of treatment. A time span of $3\frac{1}{2}$ years, a dozen different treatment workers do not make for

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1 Attention is drawn to the fact that no fewer than 12 different treatment workers were involved in recording the data within the sample records.

homogeneity. It is recognized that homogenous treatment may be possible only under experimental conditions and that an assumption of reasonably constant treatment conditions is justified and that reasonably constant treatment conditions provide an adequate basis for a study of this kind.

Recommendations lie in two directions, first from a knowledge of the weaknesses of the present study to any individual conducting future investigations of this kind, second from the findings to the agency in which the study was conducted.

A similar study in the future should take special precautions to avoid or minimize the limitations mentioned at the beginning of this chapter. It is recommended that the quality of recording in files be assessed and that only those treatment records meeting some minimum standard of recording quality be included. It is recommended further that greater foresight than that displayed by the current investigation be employed in the 'patient factors' examined, both in terms of improved meaning and clarity, and in assuring freedom from interdependency among the factors.

Recommendations to the agency in which the study was conducted perhaps indicate the manner in which the investigation has proven to be of most value. The findings in some measure do illuminate

areas of Foundation ineffectiveness and can offer some guiding evidence for continued and realistic improvements.

The finding that 'impaired' patients do not seem to respond as favorably as 'unimpaired' patients[1] raises the question of the adequacy of only out-patient treatment and seems to emphasize the need for in-patient facilities. The implications of a poor prognosis attending upon that patient with limited social assets[2] points to the need for rehabilitative measures not offered by The Foundation.

The different recovery ratio between the displayed patterns of drinking[3] tends to challenge the sufficiency of the generalized nature in which alcoholism is viewed, defined and treated at The Foundation[4]. There seems to be no clearly articulated nosological justification for the assumption that all "alcoholics" are suffering from precisely the same condition. The differing types or classifications of alcoholism bear further investigation, and the possibility of gearing different treatment approaches to meet most effectively the needs of

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1 Chapter IV, pp. 32 and 33
2 Chapter IV, pp. 35 to 41
3 Chapter IV, pp. 49 to 51
4 Chapter I , p. 2

each should receive consideration.

A clarification of agency failures can be more profitable than applause for its success. Unsuccessful experience is likely the best teacher of all. If, in any way, this study will serve the purpose of improved programming, it will be well worth the effort.

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APPENDIX "A"

SAMPLE DEFINITIONS AND DESCRIPTIONS OF ALCOHOLISM

1. "Alcoholism is a chronic illness, psychic or somatic or psychosomatic, which manifests itself as a disorder of behavior. It is characterized by the repeated drinking of alcoholic beverages, to an extent that exceeds customary dietary use or compliance with the social customs of the community and that interferes with the drinker's health or his social or economic functioning."--Keller, M., and Efron, V., "The Prevalence of Alcoholism". Quart. J. Stud. Alc. 16:619-644, 1955.

2. "Alcoholics are conspicuous by their recurrent irrestible urge to drink, lack of control over drinking when started, and little or no understanding of their own drinking behavior. Despite the predominance of drinking in the picture, it is clear that the alcoholic is emotionally ill in other ways as well".--Kerner, O., "Initiating Psychotherapy with Alcoholic Patients". Quart. J. Stud. Alc. 17:479-484, 1956.

3. "Alcoholism is a chronic disease based on a complicated etiology involving psychologic, social, and physical factors. If not arrested,

it progresses to further serious involvement of the organism at all levels of integration, with the development of a multitude of characteristic complications - medical, neuropsychiatric, psychologic, and social."--Pfeffer, Z., in Alcoholism as a Medical Problem, edited by H.D. Kruse. New York: Harper & Brothers, 1956.

4. "---a physical compulsion, coupled with a mental obsession." This is AA. New York: Alcoholics Anonymous Publishing, Inc., 1953.
5. "The abnormal drinker is the man who cannot face reality without alcohol, and whose adequate adjustment to reality is impossible as long as he uses alcohol."--Strecker, E., and Chambers, F., Alcohol One Man's Meat. New York: The Macmillan Company, 1953.
6. "---a conscious or sub-conscious, irresistable and persistent urge for an alcoholic beverage that leads its victims to take a drink regardless of the circumstances under which it is taken and also with a total disregard of any consequences, or of any hardship or suffering it may cause himself or others."--Hewitt, D., Alcoholism, A Treatment Guide for General Practitioners. Philadelphia:

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7. "---a chronic disease, characterized by a fundamental disturbance of the central nervous system, which manifests itself in a group of bodily symptoms and signs that give an imperious character to the concomitant desire to drink alcohol. On the behavioral level the disease manifests itself by a primary or secondary state of physical dependence on the drug. The symptomatology disappears temporarily after the consumption of a certain quantity of alcohol."--Marconi, J., "The Concept of Alcoholism". Quart. J. Stud. Alc. 20:216-235, 1959.

8. "Alcoholics are those excessive drinkers whose dependence upon alcohol has attained such a degree that it shows a noticeable mental disturbance or an interference with their bodily and mental health, their interpersonal relations, and their smooth social and economic functioning; or who show the prodromal signs of such developments. They therefore require treatment."--Expert Committee on Mental Health, Alcoholism Subcommittee. Second Report. World Hlth. Org. Techn. Rep. Ser., No. 48, Aug. 1952.

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10. "---his motive for drinking is the need to change or escape from reality; consequent upon his drinking there are always emotional involvements and there may be economic, physical, and social involvements; and lastly, his outstanding characteristic is the inability to give up alcohol even under social pressure and awareness of threatening consequences."--McCarthy, R. The Public Clinic Approach to Treatment. Proceedings of the First Annual Conference on Alcohol Studies. 73-75. Alcoholism Foundation of Alberta, 1954.

APPENDIX "B"

Illustrating the calculations of tetrachoric r and "z" by way of an example correlating employment status with recovery.

	120 Patients		Totals
	No Recovery	Recovery	
Employed	31 (b)	42 (a)	73 p = 60.83%
Unemployed	29 (d)	18 (c)	47 q = 39.17%
Totals	60 q' = 50%	60 p' = 50%	120

The approximate formula for tetrachoric r is:

$$\frac{ad-bc}{N^2zz'} = r + \frac{xx'r^2t}{2} \quad (13)$$

In the present study, the formula becomes considerably simplified as described in the following two points:

(1) Since the two groups of files in the sample are the same size, the value of x' is always 0 (obtained from a table, for p' = .50, q' = .50, = .00). (13) The formula then becomes:

$$r_t = \frac{ad-bc}{N^2zz'}$$

(2) N^2 is always constant (14400);

z' is always constant (.399) from table mentioned above;

N^2z' is always constant (5745.6).

Thus, the formula as applied becomes:

$$r_t = \frac{ad-bc}{5745.6z}$$

Applying this formula and calculating from the figures in the fourfold table above illustrated:

for p = .6083, q = .3917, $\quad = \frac{.2166}{2} = .1083$, z = .384

$$r_t = \frac{(42 \times 29) - (31 \times 18)}{5745.6 \times .384}$$

$$= .254$$

To test the significance of r_t, obtain a "z" score by:

(1) $SE_r = \frac{(1-r^2)}{\sqrt{N-1}} = .08541$

(2) $SE_{r_t} = SE_r \times 1.5 = .128115$

(3) $"z" = \frac{r_t}{SE_{r_t}} = 1.928$

APPENDIX "C"

PHASES OF ALCOHOLISM

The importance of stages in the development of alcoholism was formulated initially by Dr. E.M. Jellinek in 1946 from the returns of a questionnaire study of 100 members of Alcoholics Anonymous. Since that time the study has been amplified by Dr. Jellinek after analyzing the results of a more elaborate questionnaire administered to over 2,000 male alcoholics.

Listed here are the "symptoms of alcoholism" in order of their expected appearance as presented by Dr. Nelson J. Bradley at the Alberta Conference of Alcohol Studies (1955).

The Prodromal Phase

1. Alcohol Blackouts
2. Surreptitious Drinking
3. Preoccupation with Alcohol
4. Avid Drinking
5. Guilt Feelings About His Drinking Behavior
6. Avoid Reference to Alcohol
7. Increasing Frequency of "Alcoholic Blackouts"

The Crucial Phase

8. Loss of Control
9. Rationalize Drinking Behavior

10. Social Pressures
11. Grandiose Behavior
12. Marked Aggressive Behavior
13. Persistent Remorse
14. Periods of Total Abstinence
15. Changing the Pattern of His Drinking
16. Drop Friends
17. Quit Jobs
18. Behavior Becomes Alcohol Centered
19. Loss of Outside Interests
20. A Reinterpretation of Interpersonal Relations
21. Marked Self-pity
22. Geographic Escape
23. Change in Family Habits
24. Unreasonable Resentments
25. Protect His Supply
26. Neglect of Proper Nutrition
27. First Hospitalization
28. Decrease of the Sexual Drive
29. Alcoholic Jealousy
30. Regular Matutinal Drinking

The Chronic Phase

31. Prolonged Intoxications
32. Marked Ethical Deterioration
33. Impairment of Thinking
34. Alcoholic Psychoses
35. Drinks with Persons Far Below His Social Level

36. Take Recourse to "Technical Products"
37. Loss of Alcohol Tolerance
38. Indefinable Fears
39. Tremors
40. Psychomotor Inhibition
41. Drinking Takes on an Obsessive Character
42. Vague Religious Desires Develop
43. Rationalization System Fails

APPENDIX "D"

SUBJECTIVE PREDICTIONS OF THERAPEUTIC OUTCOME

Relevant to the present study, but apart from the central purpose are the results of a survey in which seven of the current Foundation treatment workers were asked by the present investigator to describe that patient with a "good prognosis" for recovery following Foundation treatment and that patient with a "poor prognosis". The workers were requested particularly to declare themselves in terms of the 21 items considered in the main part of the thesis. The composite profiles from their descriptions follow and can be compared to the results from the thesis sample.

The patient with a good prognosis came to the Foundation apparently motivated to obtain help in recovering from his alcoholism. He established the first treatment contact himself. Treatment was initiated at the clinic where he arrived accompanied, sober and in good physical condition.

The patient is 41 years of age; he has had over 3 years of post high school education. He is a Protestant, married and living with his wife. A property owner, he is employed at the time of entry into the clinic, and is without physical disabilities (with the exception of gastro-intestinal com-

plaints. He has a high occupational classification.

He has sought treatment before for his drinking problem. He began drinking between 21 and 22 years of age. Fourteen years of social drinking followed, problem drinking beginning around 36 years of age. The problem continued for 5 years until he sought Foundation treatment. He is just at the mid-point in the progression of the illness and his alcoholism is of the steady variety.

The patient with a poor prognosis approached treatment with the threat of a specific loss if he did not do so. He established the first treatment contact himself. Treatment was initiated at the clinic where the patient arrived unaccompanied and his condition was impaired from sickness.

The patient is 42 years of age; he has gone to grade 8 in school. He is a Protestant and single or living apart from his wife. He does not own his home. He is unemployed at the time of his entry into the clinic with a diversity of physical complaints impeding his employment. His regular occupation is of a low classification.

He has sought treatment before for his drinking problem. He began drinking around 16 years of age. Fewer than 9 years of social drinking followed, problem drinking beginning around 24 years

of age. The problem continued for 18 years up to his entry into the Foundation. His alcoholism has passed the mid-point in the progression of the illness and is of an episodic variety.